

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A light-emitting element comprising:

a first layer;

a second layer; and

a third layer,

wherein the first, second and third layers are interposed between first and second electrodes which faces to each other;

wherein the first layer includes TPAQn and a first substance showing an electron accepting property to the TPAQn;

wherein the second layer includes a second substance ~~of which~~ having an electron transporting property ~~[[is]]~~ higher than a hole transporting property, and a third substance showing an electron donating property to the second substance;

wherein the third layer contains a light-emitting substance;

wherein the first, second and third layers are sequentially stacked;

wherein the first layer is in contact with the first electrode;

wherein the third layer is in contact with the second electrode; and

wherein light is emitted when a voltage is applied such that a potential of the second electrode is higher than that of the first electrode.

2. (Currently Amended) A light-emitting element comprising:

a first layer;

a second layer; and

a third layer,

wherein the first, second and third layers are interposed between first and second electrodes which faces to each other;

wherein the first layer includes a TPAQn and a first substance showing an electron accepting property to the TPAQn;

wherein the second layer includes a second substance ~~of which~~ having an electron transporting property ~~[[is]]~~ higher than a hole transporting property, and a third substance showing an electron donating property to the second substance;

wherein the third layer contains a light-emitting substance;

wherein the first layer is provided to be closer to the first electrode than the second layer;

wherein the third layer is provided to be closer to the second electrode than the second layer; and

wherein light is emitted when a voltage is applied such that a potential of the second electrode is higher than that of the first electrode.

3. (Original) The light-emitting element according to claim 1,

wherein the first layer includes the first substance such that a molar ratio of the first substance to the TPAQn is 0.5 or more and 2 or less.

4. (Original) The light-emitting element according to claim 3,

wherein the third substance is one substance selected from the group consisting of alkali metal oxides and alkali earth metal oxides.

5. (Currently Amended) A light-emitting element comprising:

a first layer;

a second layer; and

a third layer,

wherein the first, second and third layers are interposed between first and second electrodes which faces to each other;

wherein the first electrode is formed using a conductive material having a reflectance of ~~[[50 %]]~~ 50% or more and ~~[[100 %]]~~ 100% or less;

wherein the second electrode is formed using a conductive material which transmits visible light;

wherein the first layer contains a TPAQn and a first substance showing an electron accepting property to the TPAQn;

wherein the second layer contains a second substance ~~of which~~ having an electron transporting property ~~[[is]]~~ higher than a hole transporting property, and a third substance showing an electron donating property to the second substance;

wherein the third layer includes x layers (x is a given positive integer) containing a light-emitting layer;

wherein the first, second and third layers are sequentially stacked;

wherein the first layer is in contact with the first electrode;

wherein one layer of the third layer is in contact with the second layer;

wherein an x-th layer in the third layer is in contact with the second electrode;

wherein y-th layer ($y \leq x$, y is a positive integer) is interposed between the light-emitting layer and the second layer;

wherein light is emitted when a voltage is applied such that a potential of the second electrode is higher than that of the first electrode; and

wherein thicknesses of the first electrode layer and the second electrode layer are adjusted to satisfy expressions 1, 2 and 3:

$$n_i d_i + n_{ii} d_{ii} + \sum_{k=1}^y n_k d_k + n_j d_j = \frac{(2m-1)\lambda}{4} \text{ -----1}$$

$$0 \leq d_j \leq d_{emi} \text{ -----2}$$

$$d_i \geq d_{ii} \text{ ---3}$$

wherein, in the expressions 1, 2 and 3, n_i indicates a refractive index of the first layer; d_i , a thickness of the first layer; n_{ii} , a refractive index of the second layer; d_{ii} , a thickness of the second layer; n_k , a refractive index of a k-th layer (k is a natural number) of layers interposed between the light-emitting layer and the second layer; d_k , a thickness of the k-th layer of the layers interposed between the light-emitting layer and the second layer; n_j , a refractive index of the light-emitting layer; d_j , a distance between a surface of the light-emitting layer in the first electrode side and a light-emitting region; λ , a wavelength of light emitted from the light-emitting element; m, a given positive integer; and d_{emi} , a thickness of the light-emitting layer.

6. (Original) A light-emitting device including, in a pixel portion, the light-emitting element according to claim 1.

7. (Original) An electronic device using the light-emitting device according to claim 6 for a display portion.

8. (Original) The light-emitting element according to claim 2,
wherein the first layer includes the first substance such that a molar ratio of the first substance to the TPAQn is 0.5 or more and 2 or less.

9. (Original) The light-emitting element according to claim 8,
wherein the third substance is one substance selected from the group consisting of alkali metal oxides and alkali earth metal oxides.

10. (Original) A light-emitting device including, in a pixel portion, the light-emitting element according to claim 2.

11. (Original) An electronic device using the light-emitting device according to claim 10 for a display portion.

12. (Original) A light-emitting device including, in a pixel portion, the light-emitting element according to claim 5.

13. (Original) An electronic device using the light-emitting device according to claim 12 for a display portion.

14. (Currently Amended) A light-emitting element comprising:

a first layer;

a second layer; and

a third layer,

wherein the first, second and third layers are interposed between first and second electrodes which faces to each other;

wherein the first layer includes an aromatic amine compound and a first substance showing an electron accepting property to the aromatic amine compound;

wherein the second layer includes a second substance ~~of which~~ having an electron transporting property ~~[[is]]~~ higher than a hole transporting property, and a third substance showing an electron donating property to the second substance;

wherein the third layer contains a light-emitting substance;

wherein the first, second and third layers are sequentially stacked;

wherein the first layer is in contact with the first electrode;

wherein the third layer is in contact with the second electrode; and

wherein light is emitted when a voltage is applied such that a potential of the second electrode is higher than that of the first electrode.

15. (Currently Amended) A light-emitting element comprising:

a first layer;

a second layer; and

a third layer,

wherein the first, second and third layers are interposed between first and second electrodes which faces to each other;

wherein the first layer includes an aromatic amine compound and a first substance showing an electron accepting property to the aromatic amine compound;

wherein the second layer includes a second substance ~~of which~~ having an electron transporting property ~~[[is]]~~ higher than a hole transporting property, and a third substance showing an electron donating property to the second substance;

wherein the third layer contains a light-emitting substance;

wherein the first layer is provided to be closer to the first electrode than the second layer;

wherein the third layer is provided to be closer to the second electrode than the second layer; and

wherein light is emitted when a voltage is applied such that a potential of the second electrode is higher than that of the first electrode.

16. (Original) The light-emitting element according to claim 14,

wherein the first layer includes the first substance such that a molar ratio of the first substance to the aromatic amine compound is 0.5 or more and 2 or less.

17. (Original) The light-emitting element according to claim 16,

wherein the third substance is one substance selected from the group consisting of alkali metal oxides and alkali earth metal oxides.

18. (Currently Amended) A light-emitting element comprising:

a first layer;

a second layer; and

a third layer,

wherein the first, second and third layers are interposed between first and second electrodes which faces to each other;

wherein the first electrode is formed using a conductive material having a reflectance of ~~[[50 %]]~~ 50% or more and ~~[[100 %]]~~ 100% or less;

wherein the second electrode is formed using a conductive material which transmits visible light;

wherein the first layer contains an aromatic amine compound and a first substance showing an electron accepting property to the aromatic amine compound;

wherein the second layer contains a second substance ~~of which~~ having an electron transporting property ~~[[is]]~~ higher than a hole transporting property, and a third substance showing an electron donating property to the second substance;

wherein the third layer includes x layers (x is a given positive integer) containing a light-emitting layer;

wherein the first, second and third layers are sequentially stacked;

wherein the first layer is in contact with the first electrode;

wherein one layer of the third layer is in contact with the second layer;

wherein an x-th layer in the third layer is in contact with the second electrode;

wherein y-th layer ($y \leq x$, y is a positive integer) is interposed between the light-emitting layer and the second layer;

wherein light is emitted when a voltage is applied such that a potential of the second electrode is higher than that of the first electrode; and

wherein thicknesses of the first electrode layer and the second electrode layer are adjusted to satisfy expressions 1, 2 and 3:

$$n_i d_i + n_{ii} d_{ii} + \sum_{k=1}^y n_k d_k + n_j d_j = \frac{(2m-1)\lambda}{4} \text{ -----1}$$

$$0 \leq d_j \leq d_{emi} \text{ ----2}$$

$$d_i \geq d_{ii} \text{ ----3}$$

wherein, in the expressions 1, 2 and 3, n_i indicates a refractive index of the first layer; d_i , a thickness of the first layer; n_{ii} , a refractive index of the second layer; d_{ii} , a thickness of the second layer; n_k , a refractive index of a k-th layer (k is a natural number) of layers interposed between the light-emitting layer and the second layer; d_k , a thickness of the k-th layer of the layers interposed between the light-emitting layer and the second layer; n_j , a refractive index of the light-emitting layer; d_j , a distance between a surface of the light-emitting layer in the first electrode side and a light-emitting region; λ , a wavelength of light emitted from the light-emitting element; m, a given positive integer; and d_{emi} , a thickness of the light-emitting layer.

19. (Original) A light-emitting device including, in a pixel portion, the light-emitting element according to claim 14.

20. (Original) An electronic device using the light-emitting device according to claim 19 for a display portion.

21. (Original) The light-emitting element according to claim 15,
wherein the first layer includes the first substance such that a molar ratio of the first substance to the aromatic amine compound is 0.5 or more and 2 or less.

22. (Original) The light-emitting element according to claim 21,
wherein the third substance is one substance selected from the group consisting of alkali metal oxides and alkali earth metal oxides.

23. (Original) A light-emitting device including, in a pixel portion, the light-emitting element according to claim 15.

24. (Original) An electronic device using the light-emitting device according to claim 23 for a display portion.

25. (Original) A light-emitting device including, in a pixel portion, the light-emitting element according to claim 18.

26. (Original) An electronic device using the light-emitting device according to claim 25 for a display portion.

27. (New) An electronic device according to claim 7, wherein the electronic device is one selected from the group consisting of a computer, a telephone and a television.

28. (New) An electronic device according to claim 11, wherein the electronic device is one selected from the group consisting of a computer, a telephone and a television.

29. (New) An electronic device according to claim 13, wherein the electronic device is one selected from the group consisting of a computer, a telephone and a television.

30. (New) An electronic device according to claim 20, wherein the electronic device is one selected from the group consisting of a computer, a telephone and a television.

31. (New) An electronic device according to claim 24, wherein the electronic device is one selected from the group consisting of a computer, a telephone and a television.

32. (New) An electronic device according to claim 26, wherein the electronic device is one selected from the group consisting of a computer, a telephone and a television.